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REMARKS

The examiner has issued a restriction requirement in the present case. Applicants provisionally elect species 1, as defined by the examiner, and have introduced claims 14 to 25 as drawn to this species. Additionally, applicants traverse the restriction requirement, and request that the examiner reconsider in light of the following.

Applicants bring to the examiner's attention the nature of the present invention, and submit that as it has passed the international phase of PCT prosecution, the invention has been determined to have unity of invention by the examiner in that phase. It is hoped that this determination will influence the present examiner to withdraw the restriction requirement that has been made.

The examiner has stated that species Ia1.1-1.456 ("1"), Ib1.1-1.456 ("2") and 2.1-3.6 ("3") do not form a single general inventive concept under PCT Rule 13.1. The species are said to lack the same or corresponding special technical features for the reason that "[they] lack a common core" (office action, pp. 2-3). As the examiner makes no further discussion of this allegedly missing feature, and as the species groupings seem to contradict the intuitive understanding that is most directly derived from this assertion, applicants respectfully submit that the restriction requirement does not properly follow PCT Rule 13.1 or 37 CFR §1.475(a). The missing "common core" is not clearly indicated, and each of the groupings shares a special technical feature that defines it generically over the prior art.

To indicate the applicants clouded understanding of the "common core" set forward by the examiner, applicants first note that the commonality extant within species 3 (i.e., that commonality between 2.1-2.66 and 3.1-3.6) is formula I of the presently claimed invention. The difference between species 1 and 2, is in the group R^4 of formula I, and these two species also, then, share the commonality of this formula. The special technical feature that defines these species collectively over the prior art is this basic formula I, in which R^4 is one of two main formulae (IIa and IIb) that thereby create two groupings, species 1 (Ia1.1-1.456) and a portion of species 3 (2.1-2.66), and species 2 (Ib1.1-1.456) and another portion of species 3 (3.1-3.6).

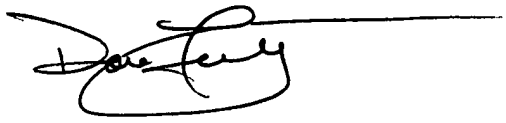
Formula I, with its two iterations, has been used by the examiner as both a basis for separation of species 1 and 2, and as a basis for inclusion of an equally disparate set of compounds in species 3. The examiner's statement that no "common core" exists between all three species seems convenient, at the least, and not demonstrably in compliance with PCT Rule 13 or 37 CFR §1.475(a). As applicants assert that formula I is a special technical feature defining the three groupings collectively over the prior art, they additionally request that unity of invention be recognized in the present case, and that the restriction requirement be withdrawn.

In view of the foregoing amendments and remarks, applicants consider that the rejections of record have been obviated and respectfully solicit passage of the application to issue.

Please find attached a check for $90.00 for the additional claims fee.

Please charge any shortage in fees due in connection with the filing of this paper, including Extension of Time fees to Deposit Account No. 11-0345. Please credit any excess fees to such deposit account.

Respectfully submitted,
KEIL & WEINKAUF



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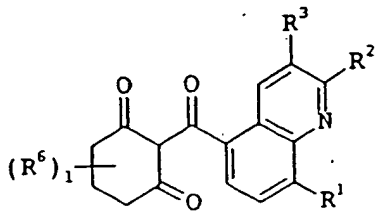
VERSION WITH MARKINGS TO SHOW CHANGES MADE TO THE CLAIMS

Please amend claim 6-9 as follows:

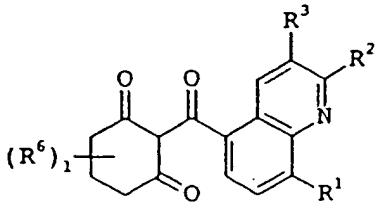
6.(amended) A process for preparing compounds of the formula I as claimed in claim 1 where R^5 = halogen, which comprises reacting a cyclohexanedione derivative of the formula III,



III

where the variables R^1 to R^3, R^6 and [1] I are each as defined in claim 1, with a halogenating agent.

7.(amended) A process for preparing compounds of the formula I as claimed in claim 1 where $R^5 = OR^7$, OSO_2R^8, OPR^8R^9, $OPOR^8R^9$ or $OPSR^8R^9$, which comprises reacting a cyclohexanedione derivative of the formula III,



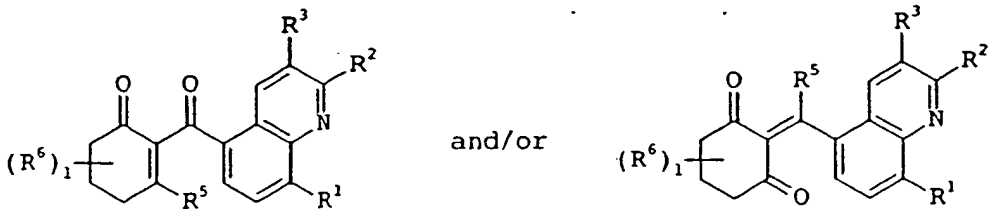
III

where the variables R^1 to R^3, R^6 and [1] I are each as defined in claim 1, with a compound of the formula IVα, IVβ, IVγ, Ivδ or IVϵ,

L^1-R^7	L^1-SO_2 R^8	L^1-PR^8R^9	L^1-POR^8R^9	L^1-PSR^8R^9
(IVα)	(IVβ)	(IVγ)	(IVδ)	(IV ϵ)

where the variables R^7 to R^9 are each as defined in claim 1 and L^1 is a nucleophilically replaceable leaving group.

8.(amended) A process for preparing compounds of the formula I as claimed in claim 1 where R^5 = OR^7, SR^7, POR^8R^9, $NR^{10}R^{11}$, $ONR^{11}R^{12}$, N-linked heterocyclyl or O-(N-linked heterocyclyl), which comprises reacting a compound of the formula I α (≡ I where R^5 = halogen, OSO_2R^8),



I where R^5= halogen or OSO_2R^8

where the variables R^1 to R^3, R^6 and [1] I are each as defined in claim 1, with a compound of the formula Vα,Vβ, Vγ,Vδ,Vε,Vη, Vϑ,

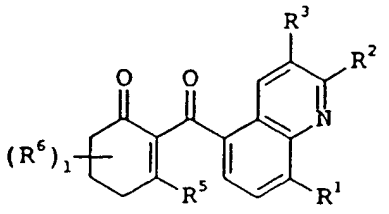
HOR^7	HSR^7	$HPOR^8R^9$	$HNR^{10}R^{11}$	$HONR^{11}R^{12}$
(Vα)	(Vβ)	(Vγ)	(Vδ)	(Vε)

H(N-linked heterocyclyl) Vη

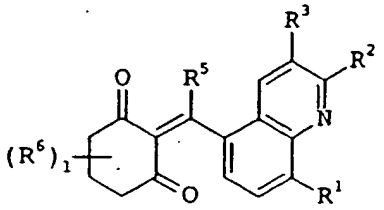
H(ON-linked heterocyclyl) Vϑ

where the variables R^7 to R^{12} are each as defined in claim 1, if appropriate in the presence of a base.

9.(amended) A process for preparing compounds of the formula I as claimed in claim 1, where $R^5 = SOR^8$, SO_2R^8, which comprises reacting a compound of the formula Iβ (≡I where $R^5 = SR^8$),



and/or

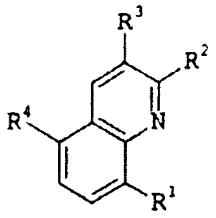


I where $R^5 = SR^8$

where the variables R^1 to R^8 and [1] I are each as defined in claim 1, with an oxidizing agent.

Please add new claims 14-25 as follows

14.(newly added) A cyclohexenonequinolinoyl derivative of the formula I



I

where:

R^1 is hydrogen, nitro, halogen, cyano, C_1-C_6-alkyl, C_1-C_6-haloalkyl, C_1-C_6-alkoxyiminomethyl, C_1-C_6-alkoxy, C_1-C_6-haloalkoxy, C_1-C_6-alkylthio, C_1-C_6-haloalkylthio, C_1-C_6-alkylsulfinyl, C_1-C_6-haloalkylsulfinyl, C_1-C_6-alkylsulfonyl, C_1-C_6-haloalkylsulfonyl, aminosulfonyl, N-(C_1-C_6--

alkyl)aminosulfonyl,

N, N-di-(C_1-C_6-alkyl) aminosulfonyl ,

N-(C_1-C_6--alkylsulfonyl)amino,

N-(C_1-C_6-haloalkylsulfonyl)amino,

N-(C_1-C_6-alkyl)-N-(C_1-C_6-alkylsulfonyl)amino,

N-(C_1-C_6--alkyl)-N-(C_1-C_6-haloalkylsulfonyl)amino,

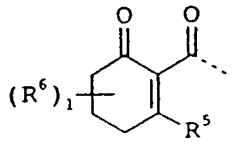
phenoxy, heterocyclyloxy, phenylthio or heterocyclylthio, where the four last-mentioned radicals may be partially or fully halogenated and/or may carry one to three of the following substituents :

nitro, cyano, C_1-C_4-alkyl, C_1-C_4-haloalkyl,

C_1-C_4-alkoxy or C_1-C_4-haloalkoxy;

R^2, R^3 are hydrogen, C_1-C_6-alkyl, C_1-C_6-haloalkyl or halogen;

R^4 is a compound IIa



IIa

where

R^5 is halogen, OR^7, SR^7, SOR^8, SO_2R^8, OSO_2R^8, POR^8R^9, OPR^8R^9, $OPOR^8R^9$, $OPSR^8R^9$, $NR^{10}R^{11}$, $ONR^{11}R^{12}$, N-linked heterocyclyl or O-(N-linked heterocyclyl), where the heterocyclyl radical of the two last-mentioned substituents may be partially or fully halogenated and/or may carry one to three of the following radicals:

nitro, cyano, C_1-C_4-alkyl, C_1-C_4-haloalkyl, C_1-C_4-alkoxy or C_1-C_4-haloalkoxy;

R^7 is C_1-C_6,-alkyl, C_3-C_6-alkenyl, C_3-C_6-haloalkenyl, C_3-C_6-alkynyl, C_3-C_6-haloalkynyl, C_3-C_6-cyloalkyl, C_1-C_{20}-alkylcarbonyl, C_2-C_6-alkenylcarbonyl, C_2-C_6-alkynylcarbonyl, C_3-C_6-cyloalkylcarbonyl, C_1-C_6-alkoxycarbonyl, C_3-C_6-alkenyloxycarbonyl, C_3-C_6-alkynyloxycarbonyl, (C_1-C_{20}-alkylthio)carbonyl, C_1-C_6-alkylaminocarbonyl, C_3-C_6-alkenylaminocarbonyl, C_3-C_6-alkynylaminocarbonyl, N,N-di-(C_1-C_6-alkyl)aminocarbonyl, N-(C_3-C_6-alkenyl)-N-(C_1-C_6-alkyl) aminocarbonyl , N-(C_3-C_6 alkynyl)-N-(C_1-C_6-alkyl) aminocarbonyl , N-(C_1-C_6-alkoxy)- N-(C_1-C_6-alkyl) aminocarbonyl , N-(C_3-C_6-alkenyl)- N-(C_1-C_6-alkoxy) aminocarbonyl , N-(C_3-C_6-alkynyl)- N-(C_1-C_6-alkoxy) aminocarbonyl, di-(C_1-C_6-alkyl)- aminothiocarbonyl, C_1-C_6-alkylcarbonyl-C_1-C_6-alkyl, C_1-C_6-alkoxyimino-C_1-C_6-alkyl, N-(C_1-C_6-alkylamino) imino-C_1-C_6-alkyl or N,N-di-(C_1-C_6-alkylamino)imino-C_1-C_6-alkyl, where the above-mentioned alkyl, cycloalkyl and alkoxy radicals may be partially or fully halogenated and/or may carry one to three of the following groups: cyano, C_1-C_4-alkoxy, C_1-C_4-alkylthio, di-(C_1-C_4- alkyl)amino, C_1-C_4-alkylcarbonyl, C_1-C_4-alkoxycarbonyl, C_1-C_4-alkoxy-C_1-C_4-alkoxycarbonyl, di-(C_1-C_4-alkyl)amino-C_1-C_4-alkoxycarbonyl, hydroxycarbonyl, C_1-C_4-

alkylaminocarbonyl, di-(C_1-C_4-alkyl)aminocarbonyl, aminocarbonyl, C_1-C_4-alkylcarbonyloxy or C_3-C_6-cycloalkyl;
phenyl, heterocyclyl, phenyl-C_1-C_6-alkyl, heterocyclyl-C_1-C_6-alkyl, phenylcarbonyl-C_1-C_6-alkyl, heterocyclylcarbonyl-C_1-C_6-alkyl, phenylcarbonyl, heterocyclylcarbonyl, phenoxycarbonyl, heterocyclyloxycarbonyl, phenoxythiocarbonyl, heterocyclyloxythiocarbonyl, phenoxy-C_1-C_6-alkylcarbonyl, heterocyclyloxy-C_1-C_6-alkylcarbonyl, phenylaminocarbonyl, N-(C_1-C_6-alkyl)-N-(phenyl)aminocarbonyl, heterocyclylaminocarbonyl, N-(C_1-C_6-alkyl)-N-(heterocyclyl)aminocarbonyl, phenyl-C_2-C_6-alkenylcarbonyl or heterocyclyl-C_2-C_6-alkenylcarbonyl, where the phenyl and the heterocyclyl radical of the 20 last-mentioned substituents may be partially or fully halogenated and/or may carry one to three of the following radicals:
nitro, cyano, C_1-C_4-alkyl, C_1-C_4-halogenalkyl, C_1-C_4-alkoxy or C_1-C_4-haloalkoxy;

R^8,R^9 are C_1-C_6-alkyl, C_3-C_6-alkenyl, C_3-C_6-haloalkenyl, C_3-C_6-alkynyl, C_3-C_6-haloalkynyl, C_3-C_6-cycloalkyl, hydroxyl, C_1-C_6-alkoxy, amino, C_1-C_6-alkylamino, C_1-C_6-haloalkylamino, di-(C_1-C_6-alkyl)amino or di-(C_1-C_6-haloalkyl)amino, where the abovementioned alkyl, cycloalkyl and alkoxy radicals may be partially or fully halogenated and/or may carry one to three of the following groups:
cyano, C_1-C_4-alkoxy, C_1-C_4-alkylthio, di-(C_1-C_4- alkyl)amino, C_1-C_4-alkylcarbonyl, C_1-C_4-alkoxycarbonyl, C_1-C_4-alkoxy-C_1-C_4-alkoxycarbonyl, di-(C_1-C_4-alkyl)amino-C_1-C_4-alkoxycarbonyl,
hydroxycarbonyl, C_1-C_4-alkylaminocarbonyl, di-(C_1-C_4-alkyl)aminocarbonyl, aminocarbonyl, C_1-C_4-alkylcarbonyloxy or C_3-C_6-cycloalkyl;

phenyl, heterocyclyl, phenyl-C_1-C_6-alkyl, heterocyclyl-C_1-C_6-alkyl, phenoxy, heterocyclyloxy, where the phenyl and the heterocyclyl radical of the last-mentioned substituents may be partially or fully halogenated and/or may carry one to three of the following radicals:
nitro, cyano, C_1-C_4-alkyl, C_1-C_4-haloalkyl, C_1-C_4-alkoxy or C_1-C_4-haloalkoxy;

R^{10} is C_1-C_6-alkyl, C_3-C_6-alkenyl, C_3-C_6-haloalkenyl, C_3-C_6-alkynyl, C_3-C_6-haloalkynyl, C_3-C_6-cycloalkyl, hydroxyl, C_1-C_6-alkoxy, C_3-C_6-alkenyloxy, C_3-C_6-alkynyloxy, amino, C_1-C_6-alkylamino, di-(C_1-C_6-alkyl)amino or C_1-C_6-alkylcarbonylamino, where the abovementioned alkyl, cycloalkyl and alkoxy radicals may be partially or fully halogenated and/or may carry one to three radicals from the following group:
cyano, C_1-C_4-alkoxy, C_1-C_4-alkylthio, di-(C_1-C_4-alkyl)amino, C_1-C_4-alkylcarbonyl, C_1-C_4-alkoxycarbonyl, C_1-C_4-alkoxy-C_1-C_4-alkoxycarbonyl, di-(C_1-C_4-alkyl)amino-C_1-C_4-alkoxycarbonyl, hydroxycarbonyl, C_1-C_4-alkylaminocarbonyl, di-(C_1-C_4-alkyl)aminocarbonyl, aminocarbonyl, C_1-C_4-alkylcarbonyloxy or C_3-C_6-cycloalkyl;
phenyl, heterocyclyl, phenyl-C_1-C_6-alkyl or heterocyclyl-C_1-C_6-alkyl, where the phenyl or heterocyclyl radical of the four last-mentioned substituents may be partially or fully halogenated and/or may carry one to three of the following radicals:
nitro, cyano, C_1-C_4-alkyl, C_1-C_4-haloalkyl, C_1-C_4-alkoxy or C_1-C_4-haloalkoxy;

R^{11},$R^{12}$are C_1-C_6-alkyl, C_3-C_6-alkenyl, C_3-C_6-alkynyl or C_1-C_6-alkylcarbonyl;

l is 0;

and their agriculturally useful salts.

15.(newly added) A cyclohexenonequinolinoyl derivative of the formula I as claimed in claim 14, where

R^1 is halogen, C_1-C_6-alkyl, C_1-C_6-haloalkyl, C_1-C_6-alkoxy, C_1-C_6-alkylthio, heterocyclyloxy or phenylthio, where the two last-mentioned radicals may be partially or fully halogenated and/or may carry one to three of the substituents mentioned below:
nitro, cyano, C_1-C_4-alkyl, C_1-C_4-haloalkyl, C_1-C_4-alkoxy or C_1-C_4-haloalkoxy;

R^5 is halogen, OR^7, SR^7, SOR^8, SO_2R^8, OSO_2R^8, OPR^8R^9, $OPOR^8R^9$ $OPSR^8R^9$, $NR^{10}R^{11}$ or N-bonded heterocyclyl which may be partially or fully halogenated and/or may carry one to three of the following radicals: nitro, cyano, C_1-C_4-alkyl, C_1-C_4-haloalkyl, C_1-C_4-alkoxy or C_1-C_4-haloalkoxy .

16.(newly added) A cyclohexenonequinolinoyl derivative of the formula I as claimed in claim 14, where

R^5 is halogen, OR^7, $NR^{10}R^{11}$ or N-bonded heterocyclyl which may be partially or fully halogenated and/or may carry one to three of the following radicals:
nitro, cyano, C_1-C_4-alkyl, C_1-C_4-haloalkyl, C_1-C_4-alkoxy or C_1-C_4-haloalkoxy.

17.(newly added) A cyclohexenonequinolinoyl derivative of the formula I as claimed in claim 14, where

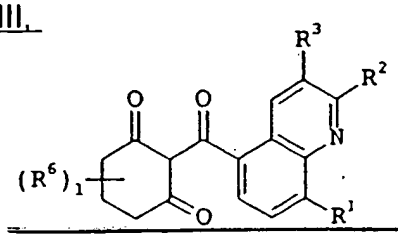
R^7 is C_1-C_6-alkyl, C_1-C_{20}-alkylcarbonyl, C_1-C_6-alkoxycarbonyl, (C_1-C_{20}-alkylthio)carbonyl, N,N-di-(C_1-C_6-alkyl)aminocarbonyl, phenyl, phenylcarbonyl or phenoxy-C_1-C_6-alkylcarbonyl, where the phenyl radical of the three last-mentioned substituents may be partially or fully halogenated and/or may carry one to

three of the following radicals:
nitro, cyano, C_1-C_4-alkyl, C_1-C_4-haloalkyl, C_1-C_4-alkoxy or C_1-C_4-haloalkoxy;

R^{10} is C_1-C_6-alkyl or C_1-C_6-alkoxy;

R^{11} is C_1-C_6-alkyl.

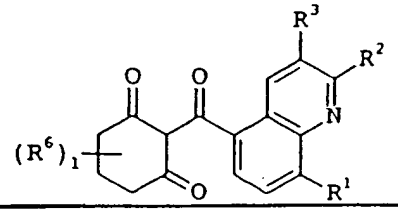
18.(newly added) A process for preparing compounds of the formula I as claimed in claim 14 where R^5 = halogen, which comprises reacting a cyclohexanedione derivative of the formula III,



III

where the variables R^1 to R^3, and I are each as defined in claim 14, with a halogenating agent.

19.(newly added) A process for preparing compounds of the formula I as claimed in claim 14 where $R^5 = OR^7$, OSO_2R^8, OPR^8R^9, $OPOR^8R^9$ or $OPSR^8R^9$, which comprises reacting a cyclohexanedione derivative of the formula III,



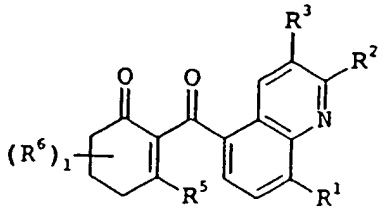
III

where the variables R^1 to R^3, and I are each as defined in claim 14, with a compound of the formula IVα, IVβ, IVγ, Ivδ or IVε,

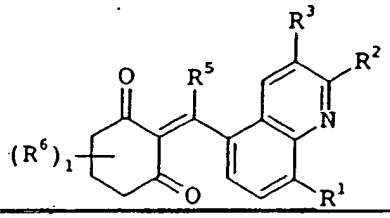
L^1-R^7	L^1-SO_2R^8	L^1-PR^8R^9	L^1-POR^8R^9	L^1-PSR^8R^9
(IVα)	(IVβ)	(IVγ)	(IVδ)	(IV ε)

where the variables R^7 to R^9 are each as defined in claim 14 and L^1 is a nucleophilically replaceable leaving group.

20.(Newly added) A process for preparing compounds of the formula I as claimed in claim 14 where $R^5 = OR^7$, SR^7, POR^8R^9, $NR^{10}R^{11}$, $ONR^{11}R^{12}$, N-linked heterocyclyl or O-(N-linked heterocyclyl), which comprises reacting a compound of the formula I α (≡ I where R^5 = halogen, OSO_2R^8),



and/or



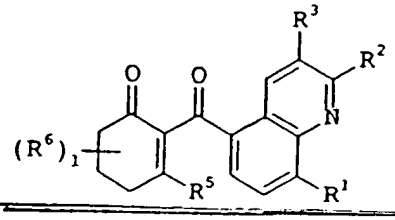
I where R^5= halogen or OSO_2R^8

where the variables R^1 to R^3, and I are each as defined in claim 14, with a compound of the formula Vα, Vβ, Vγ, Vδ, Vε, Vη, Vϑ,

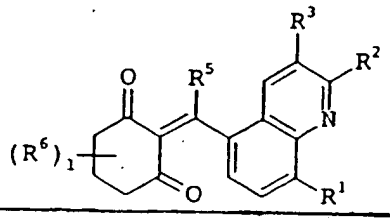
HOR^7	HSR^7	$HPOR^8R^9$	$HNR^{10}R^{11}$	$HONR^{11}R^{12}$
(Vα)	(Vβ)	(Vγ)	(Vδ)	(Vε)
H(N-linked heterocyclyl) Vη		H(ON-linked heterocyclyl) Vϑ		

where the variables R^7 to R^{12} are each as defined in claim 14, if appropriate in the presence of a base.

21.(Newly added) A process for preparing compounds of the formula I as claimed in claim 14 where $R^5 = SOR^8$, SO_2R^8, which comprises reacting a compound of the formula Iβ (≡I where $R^5 = SR^8$),



and/or



I where R^5= SR^8

where the variables R^1 to R^5, R^7, R^8 and I are each as defined in claim 14, with an oxidizing agent.

22.(newly added) A composition, comprising a herbicidally effective amount of at least one cyclohexenon-equinolinoyl derivative of the formula I or an agriculturally useful salt of formula I as claimed in claim 14 and auxiliaries which are customarily used for formulating crop protection agents.

23.(newly added) A process for preparing compositions as claimed in claim 22, which comprises mixing a herbicidally effective amount of at least one cyclohexenonequinolinoyl derivative of the formula I or an agriculturally useful salt of formula I and auxiliaries which are customarily used for formulating crop protection agents.

24.(newly added) A method for controlling undesirable vegetation, which comprises allowing a herbicidally effective amount of at least one cyclohexenonequinolinoyl derivative of the formula I or an agriculturally useful salt of formula I as claimed in claim 14 to act on plants, their habitat and/or on seeds.

25.(newly added) The use of cyclohexenonequinolinoyl derivatives of the formula I or their agriculturally useful salts as claimed in claim 14 as herbicides.